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NEWS

U.S. Department of the Interior

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Contact: Trudy Harlow, 202-513-0574
or Frank Quimby, 202-208-7291

Water 2025:
Preventing Crises and Conflict in the West

Interior Proposal Would Concentrate Federal Resources to Support Community Solutions

(WASHINGTON)-Chronic water supply problems in the West are one of the greatest challenges facing the nation in the coming decades, Secretary Norton said today in announcing her proposal to help communities predicted to experience conflicts over water during the next 25 years even in the absence of drought.

The proposal--*Water 2025: Preventing Crises and Conflict in the West* --calls for concentrating existing federal financial and technical resources in key western watersheds and in critical research and development, such as water conservation and desalinization, that will help to predict, prevent, and alleviate water supply conflicts. The President's FY 2004 budget calls for an initial investment of $11 million for such efforts.

"Crisis management is not an effective solution for addressing long-term, systematic water supply problems," said Norton, noting that crises in the Klamath River and Middle Rio Grande River basins-where farmers, urban residents, Native Americans, and fish and wildlife have been affected by water shortages-vividly demonstrate the consequences of failing to strategically address the problem of competing demands for a finite water supply.

"Water 2025 recognizes that states, tribes, and local governments should have a leading role in meeting these challenges," Norton said. "The Department of the Interior should focus its attention and resources on areas where scarce federal dollars can provide the greatest benefits to the West and the nation."

In some areas, the Secretary noted, there is not enough water to meet the

existing needs of cities, farms, tribes, and the environment even under normal water conditions. And, the continuing drought magnifies already stressed water supply situations in important river basins.

Driving this new reality, she noted, are explosive population growth in western urban areas, the increasing need for water for environmental and recreational users, and the national importance of food and fiber production from Western farms and ranches.

The Water 2025 effort could help stretch existing water supplies by improving conservation, using more efficiencies, and better monitoring of water resources. Modernizing aging water supply structures—from dams and reservoirs to pumping stations, pipelines, and canals—can help stretch existing water supplies.

In some cases, collaborative approaches and market-based transfers can use water banks or other means to meet emerging needs. Federal investments in research and development can provide more affordable water treatment technologies, such as desalination, to increase water supplies in critical areas.

"Water 2025 provides a basis for a public discussion of the realities that face the West, so that decisions can be made at the appropriate level in advance of water supply crises," Norton explained. In working with western communities, Interior is guided by the principles of federalism and fiscal reality at both the federal and state levels.

"Water 2025 is a commitment by Interior to work with states, tribes, local governments, and the public to address water supply challenges in the West," Norton said. "These decisions cannot and should not be driven from a federal level. They should be based on-and will require-local and regional support."

A primary principle of Water 2025 is that solutions to complex water supply issues must recognize and respect state, tribal, and federal water rights, contracts, and interstate compacts and decrees of the United States Supreme Court that allocate the right to use water.

The Department is confident, Norton said, that these water supply challenges can and will be met in a manner that protects and enhances the economy and the environment of the West and the nation.

www.doi.gov/water2025/

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Water 2025:

Preventing Crises and Conflict in the West

- **Water is the lifeblood of the American West and the foundation of its economy. It is also the scarcest resource in some of the fastest growing areas of the country**

- Water 2025 is intended to focus attention on the reality that explosive population growth in western urban areas, the emerging need for water for environmental and recreational uses, and the national importance of the domestic production of food and fiber from western farms and ranches is driving major conflicts between these competing uses of water.

- **In some areas of the West, existing water supplies are, or will be, inadequate to meet the demands for water for people, cities, farms, and the environment even under normal water supply conditions.**

- Water 2025 recognizes that states, tribes, and local governments should have a leading role in meeting these challenges, and that the Department of the Interior should focus its attention and resources on areas where scarce federal dollars can provide the greatest benefits to the West and the rest of the Nation

- Water 2025 provides the basis for a public discussion in advance of water crises and sets forth a framework to focus on meeting water supply challenges in the future. This framework includes:

  - **Six Principles** to guide Interior in addressing water problems.
  - **Five Realities** that drive water crises.
  - **Four Key Tools** to help proactively manage scarce water resources.

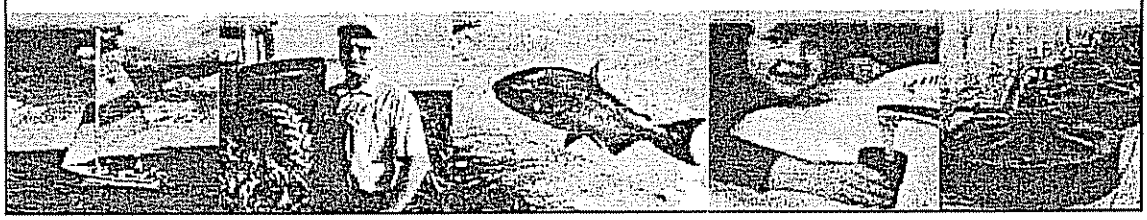
- Six Principles
  - Recognize and respect state, tribal, and federal water rights, contracts, and interstate compacts or decrees of the United States Supreme Court that allocate the right to use water.
  - Maintain and modernize existing water facilities so they will continue to provide water and power.
  - Enhance water conservation, use efficiency, and resource monitoring to allow existing water supplies to be used more effectively.
  - Use collaborative approaches and market based transfers to minimize conflicts.
  - Improve water treatment technology, such as desalination, to help increase water supply.
  - Existing water supply infrastructure can provide additional benefits for existing and emerging needs for water.

- Five Realities
  - Explosive population growth in areas of the West where water is already scarce.
  - Water shortages occur frequently in the West.
  - Over-allocated watersheds can cause crisis and conflict.
  - Water facilities are aging.
  - Crisis management is not effective in dealing with water conflicts

- Four Key Tools
  - Conservation, Efficiency, and Markets
  - Collaboration
  - Improved Technology
  - Remove Institutional Barriers and Increase Interagency Cooperation

- Water 2025 will:
  - Facilitate a more forward-looking focus on water-starved areas of the country;
  - Help to stretch or increase water supplies to satisfy the demands of growing populations, protect environmental needs, and strengthen regional, tribal and local economies;
  - Provide added environmental benefits to many watersheds, rivers, and streams;
  - Minimize water crises in critical watersheds by improving the environment and addressing the effects of drought on important economies; and,
  - Provide a balanced, practical approach to water management for the next century.

Visit our Website at www.doi.gov/water2025



Water 2025:

Preventing Crises and Conflict in the West

FREQUENTLY ASKED QUESTIONS

Q: Why is "Water 2025: Preventing Crises and Conflict in the West," being announced at this time?
A: In 2001 Secretary Norton asked the Bureau of Reclamation to prepare an assessment of where existing water supplies are likely to be inadequate to meet water demands for farms, ranches, cities, recreation and the environment over the next 25 years. Secretary Norton also asked the Bureau of Reclamation to look at current conditions in the West and identify the likely areas where the next crises over water may occur. Water 2025 provides a basis for public discussion of the realities that face the west, so that decisions can be made at the appropriate level in advance of a water supply crisis.

Q. Does Water 2025 propose changes to federal or state environmental laws?
A. No.

Q. Will Water 2025 be used to take water away from agriculture?
A. No. Water 2025 seeks to encourage voluntary water transfers through water banks or other willing buyer/willing seller measures. In fact, one of the goals of Water 2025 is to develop means by which agricultural producers can rent or lease their water in times of drought to municipalities or other users, and still have the ability to farm in most years.

Q. Will Water 2025 transfer control over water from states to the federal government?
A. No. Water 2025 can only work if it is implemented in accordance with state law.

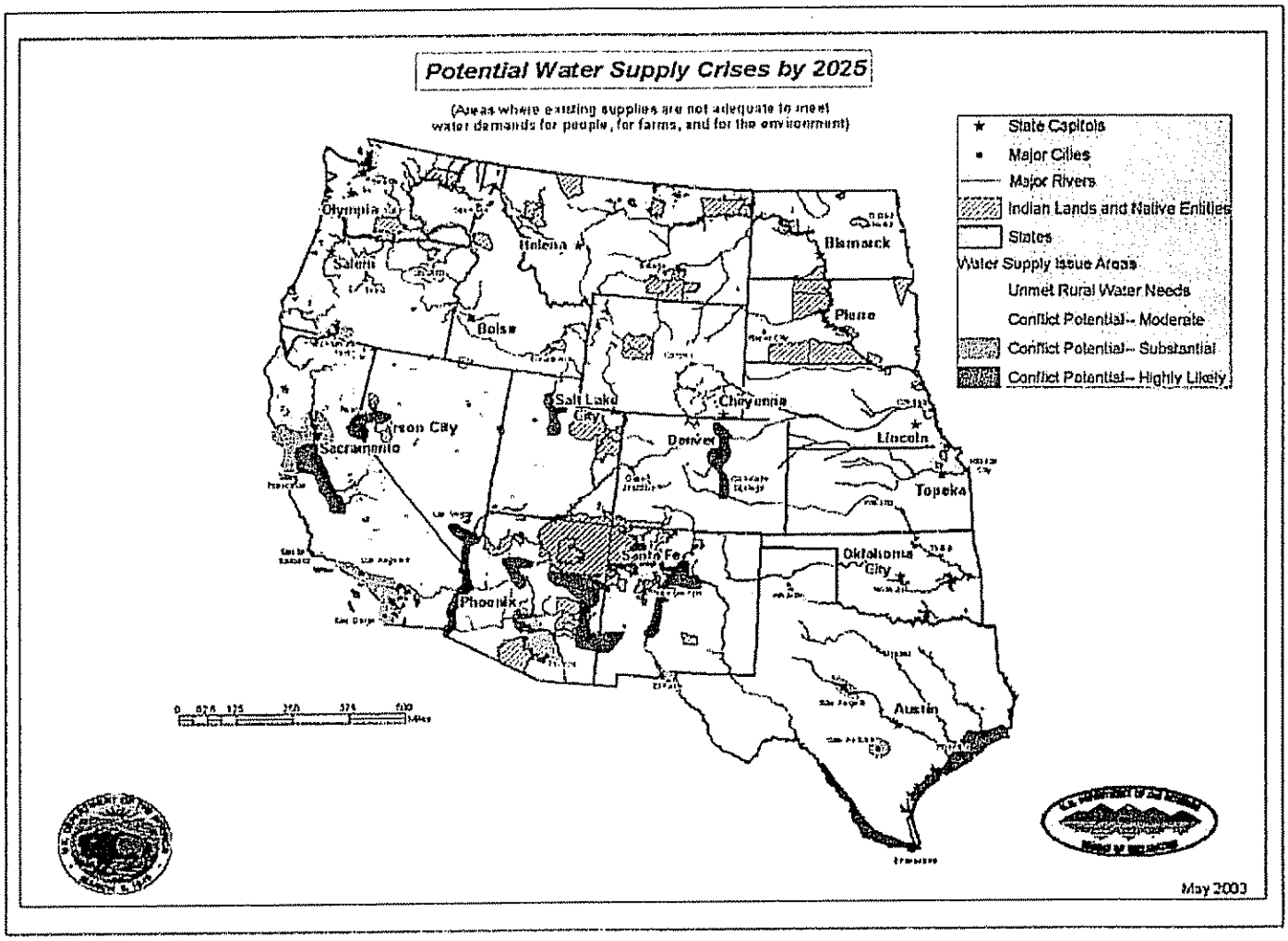
Q. How much will Water 2025 cost?
A. In collaboration with local stakeholders, Interior will concentrate existing federal financial and technical resources on western watersheds with a potential for conflict over water by 2025 and in critical research and development. The President has requested $11 million for the Bureau of Reclamation's budget for a Western Water Initiative in FY 2004, reflecting the Administration's commitment to focus on the challenges later outlined more fully in Water 2025.

Q. How can technology help?
A. Water 2025 will seek to reduce the cost of water desalination and advanced water treatment through improved interagency coordination of research and focused investment in areas most needing planning support. Water 2025 also will facilitate the installation and implementation of new water management technologies by modernizing existing water storage and delivery systems, improving the efficient and effective management of vital water resources in the West

Q. Will Water 2025 result in "winners" and "losers?"
A: The only way anyone can lose with Water 2025 is if actions are not taken to address future conflicts over water. Water 2025 is intended to focus attention on the reality that explosive population growth in western urban areas, the emerging need for water for environmental and recreational uses, and the national importance of the domestic production of food and fiber from western farms and ranches is driving major conflicts between these competing uses of water.

Q. In the end, what do you hope to achieve with Water 2025?

A. We want to accomplish two things: First, Water 2025 recognizes the need for a vigorous public discussion over water issues. Doing nothing will have significant negative consequences, and the public must be able to make an educated choice about their future. Second, Water 2025 is a commitment to moving forward in strategically using the appropriate tools that will help minimize or prevent future water conflict and crises in the West.

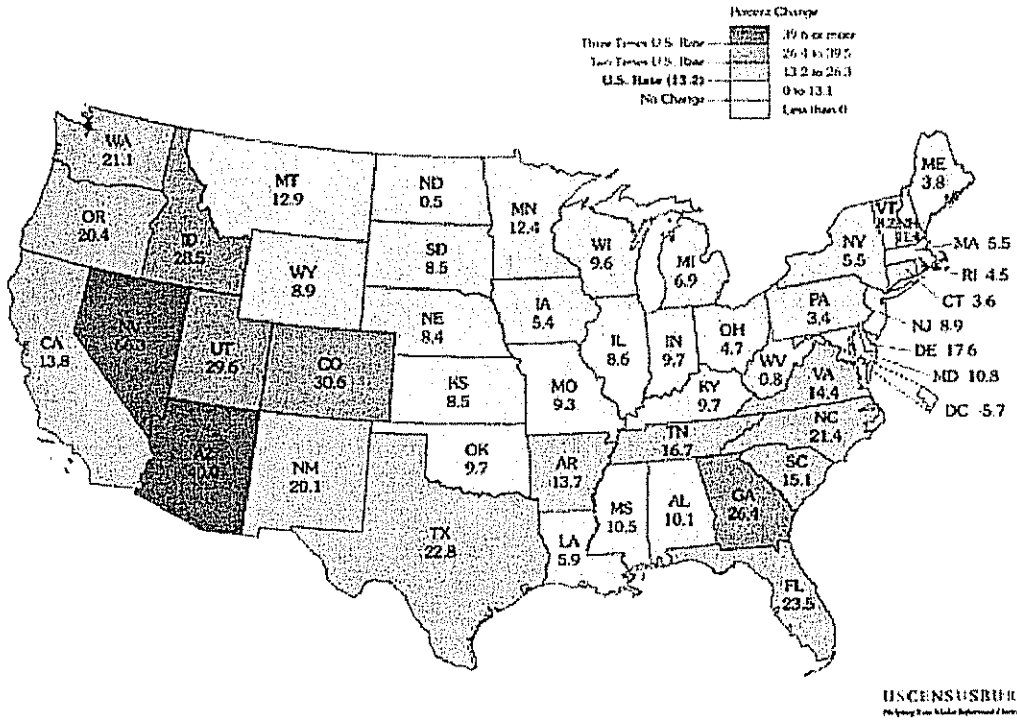


Higher Resolution Version of Graphics (File size - 248 KB)

High Resolution Adobe PDF Version of Graphic (File size - 1.89 MB)

Demographic Changes: Population Has Grown Fastest in the West, Particularly in the "Public Land States"

Percent Change in Resident Population for the 48 States and the District of Columbia: 1990 to 2000



- Darker areas denote faster growth rates.
- Nevada (66%) and Arizona (40%) lead the nation.
- Intermountain states average about 30%.

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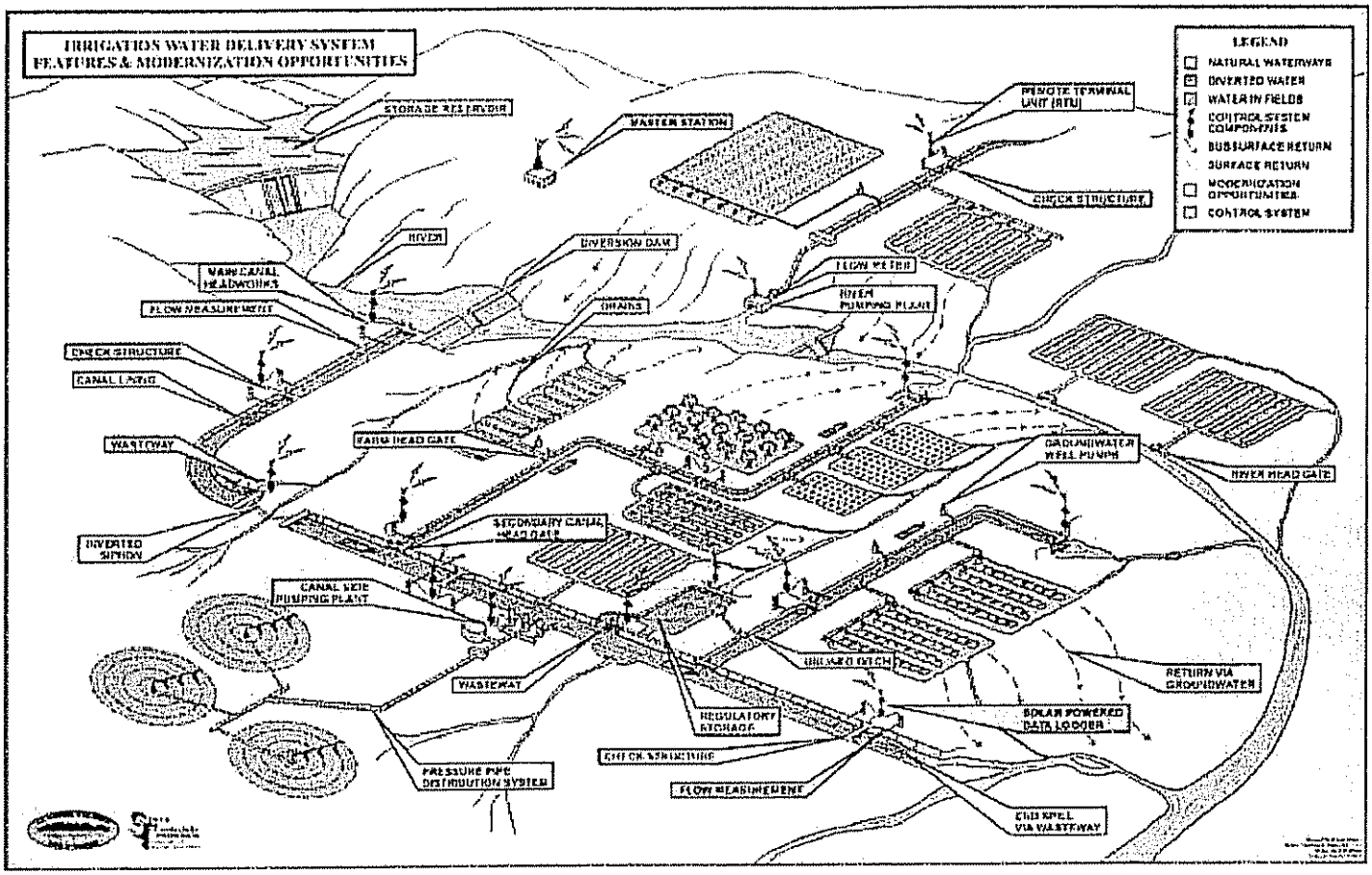

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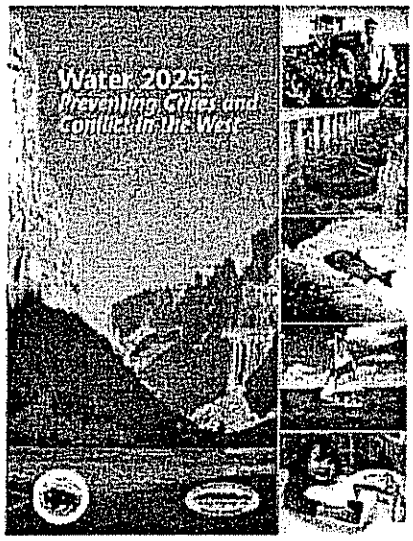


Below is the web based version of the Executive Summary/Fact Sheet and the full report on Water 2025: Preventing Crises and Conflict in the West. It will open a new browser window. Just close the window to return to this page. You may get rid of the outline frame on the left by clicking on the edge of the "Outline" button. You may move through the slides by using the forward and back navigation buttons at the bottom of the screen.

Water 2025 - Executive Summary

Water 2025 - Preventing Crisis and Conflict in the West

Following is the Adobe Acrobat PDF version of this document.

Water 2025.pdf (File size - 856 KB)

The following are the Executive Summary and three additional files, which together, provide the full presentation on Water 2025 - Preventing Crisis and Conflict in a PowerPoint format. The presentation was divided into multiple parts because of the large file size.

Please be aware that these are very large files that will take a substantial amount of time to download.

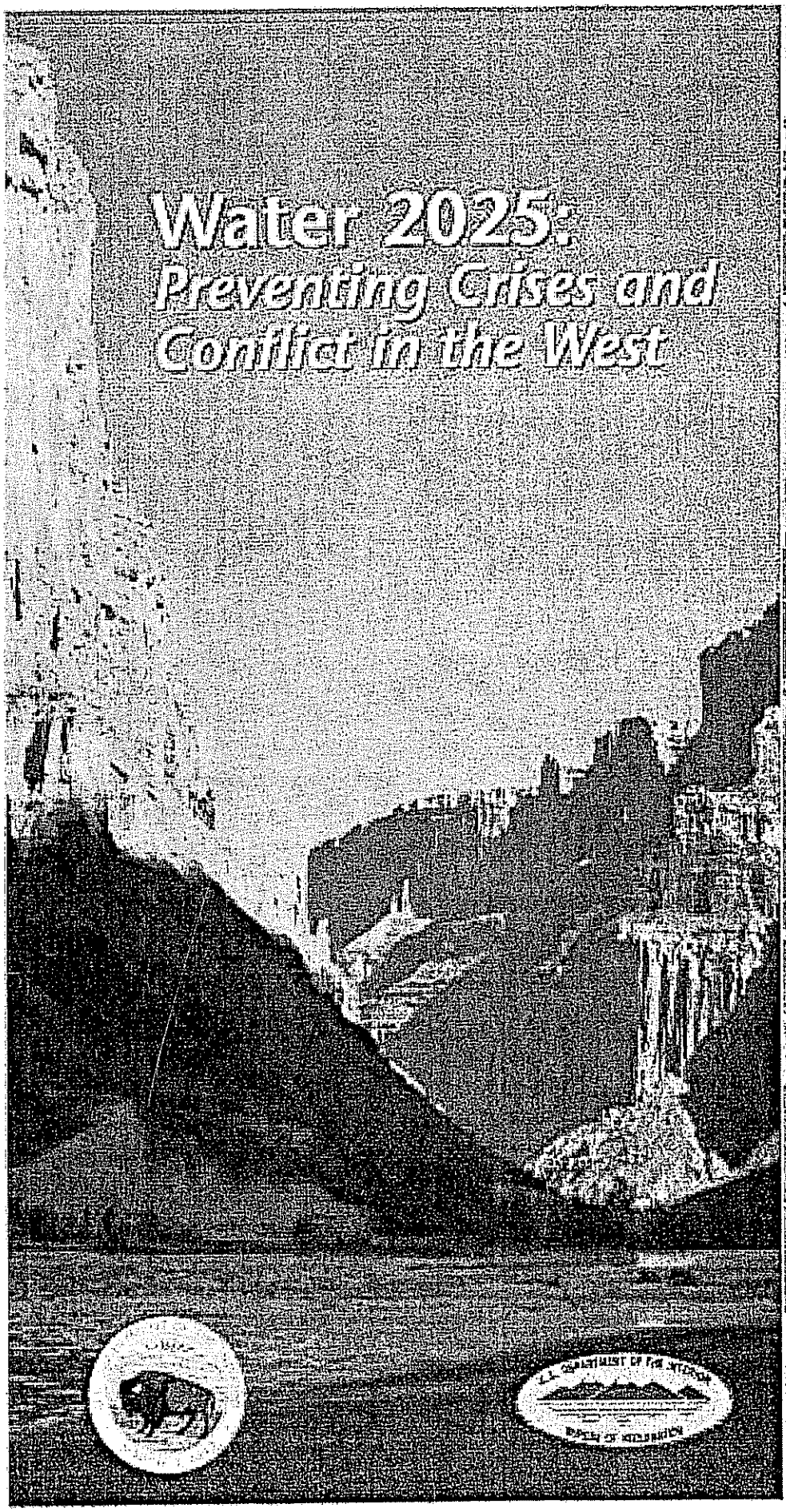
Water 2025 - Executive Summary (File size - 125 KB)

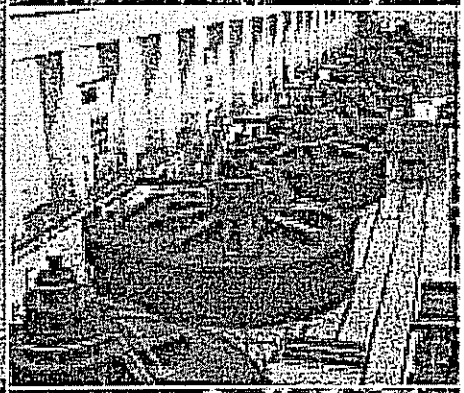
Water 2025 - Part I (File size - 15.5 MB)

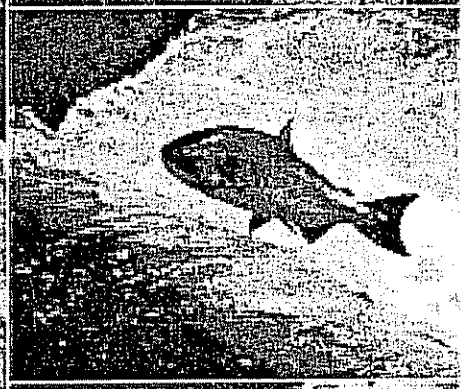
Water 2025 - Part II (File size - 7.6 MB)

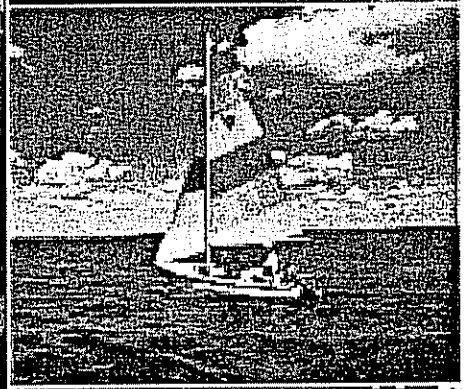
Water 2025 - Part III (File size - 11.8 MB)

Water 2025:
Preventing Crises and Conflict in the West









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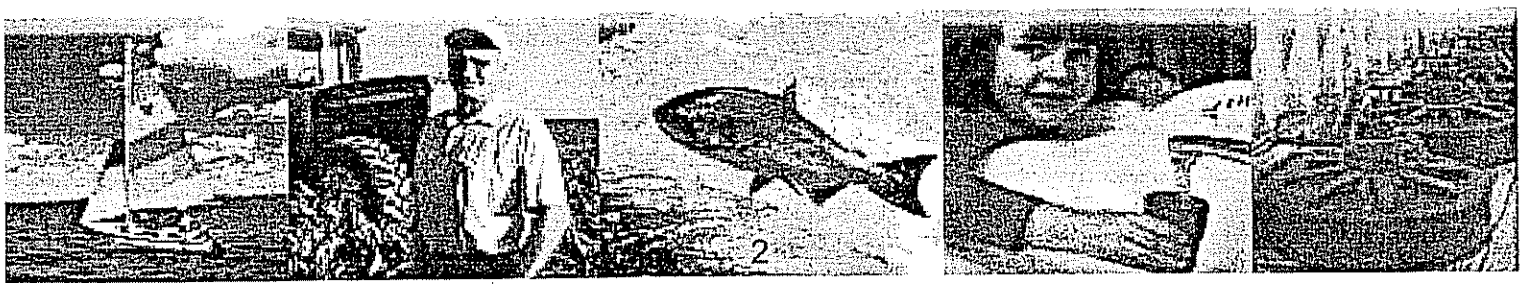
Water 2025:
Preventing Crises and Conflict in the West

Water is the lifeblood of the American West and the foundation of its economy. More than a century ago, American pioneers began harnessing the water of the West, opening vast new lands for settlement and development. Today, the American West is the fastest growing region of the country. Water is its scarcest resource.

Water 2025 is intended to focus attention on the reality that explosive population growth in western urban areas, the emerging need for water for environmental and recreational uses, and the national importance of the domestic production of food and fiber from western farms and ranches are driving major conflicts between these competing uses of water.

Today, in some areas of the West, existing water supplies are, or will be, inadequate to meet the water demands of people, cities, farms, and the environment even under normal water supply conditions.

Water 2025 recognizes that state and local governments should have a leading role in meeting these challenges, and that the Department of the Interior should focus its attention and existing resources on areas where scarce federal dollars can provide the greatest benefits to the West and the rest of the Nation.



Water 2025:
Preventing Crises and Conflict in the West

Water 2025 has two purposes. First, it provides a basis for a public discussion of the realities that face the West so that decisions can be made at the appropriate level in advance of water supply crises.

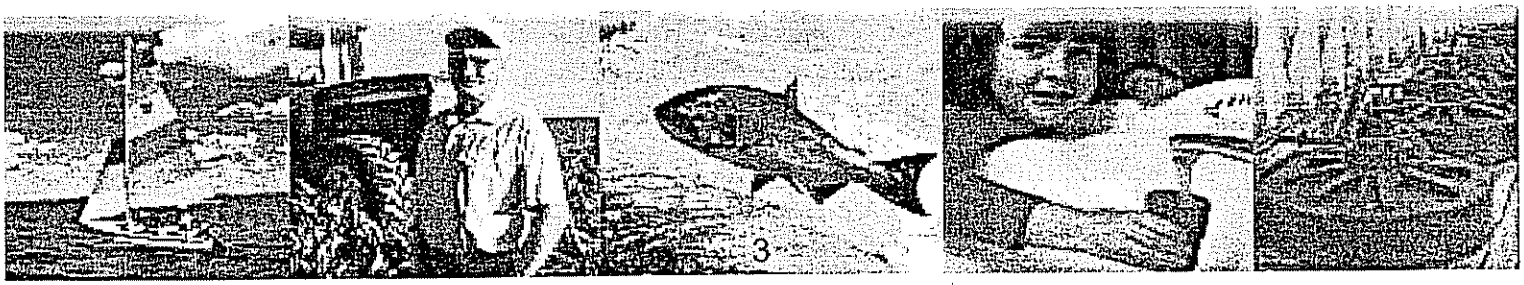
Second, Water 2025 sets forth a framework to identify the problems, solutions, and a plan of action to focus the conversation as the Department of the Interior works with states, tribes, local government, and the private sector to meet water supply challenges. This framework includes:

- **Six principles** to guide us as we address systemic water problems.
- **Five realities** that drive water crises.
- **Four key tools** to help us proactively manage our scarce water.

The Six Principles

- Solutions to complex water supply issues must recognize and respect state and federal water rights, contracts, and interstate compacts or decrees of the United States Supreme Court that allocate the right to use water.
- Existing water supply infrastructure must be maintained and modernized so that it will continue to provide water and power.
- Enhanced water conservation, use efficiency, and resource monitoring will allow existing water supplies to be used more effectively.
- Collaborative approaches and market based transfers will minimize conflicts between demands for water for people, for cities, for farms, and for the environment.
- Research to improve water treatment technology, such as desalination, can help increase water supplies in critical areas.
- Existing water supply infrastructure can provide additional benefits for existing and emerging needs for water by eliminating institutional barriers to storage and delivery of water to other uses while protecting existing uses and stakeholders.

Since 1866, federal water law and policy has deferred to states in the allocation and administration of water within their boundaries. This policy will be honored and enhanced by Water 2025.



Water 2025:
Preventing Crises and Conflict in the West

Water 2025 does not pretend to be a complete solution to the complex water needs of the West.

Principles of federalism and fiscal realities make it clear these decisions cannot and should not be driven from the federal level. Instead, they should be based on local and regional support.

Water 2025 is a commitment by the Department of the Interior to work with states, tribes, local governments and the public to address the realities of water supply challenges in the West.

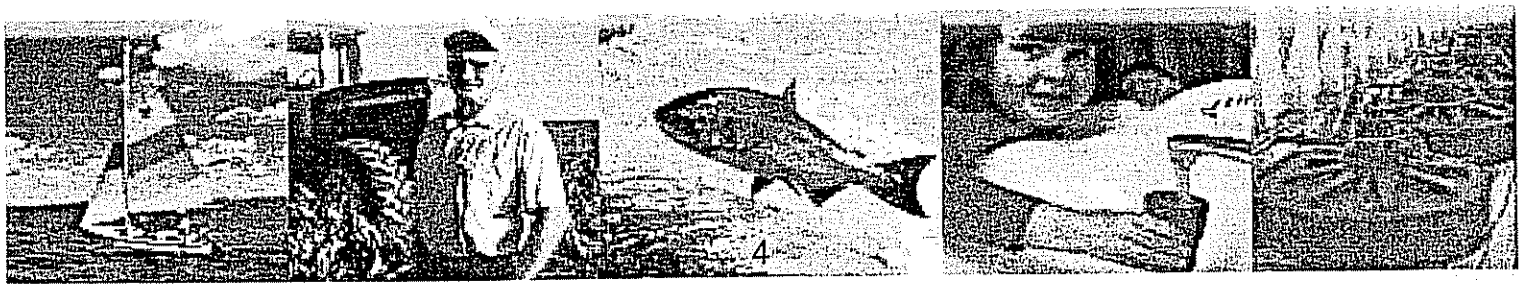
The Bureau of Reclamation's Fiscal Year 2004 budget requests $11 million for the Western Water Initiative, the first step in laying the foundation for addressing current and future water needs.

Implementation and enforcement of the federal Endangered Species Act is far more effective if a water supply crisis is avoided through collaborative efforts than through lengthy litigation or managing water supply issues on an emergency basis.

The Five Realities

Five interrelated realities of water management are creating crises in important areas in the West. These realities are:

- **Explosive population growth**
- **Water shortages exist**
- **Water shortages result in conflict**
- **Aging water facilities limit options**
- **Crisis management is not effective**

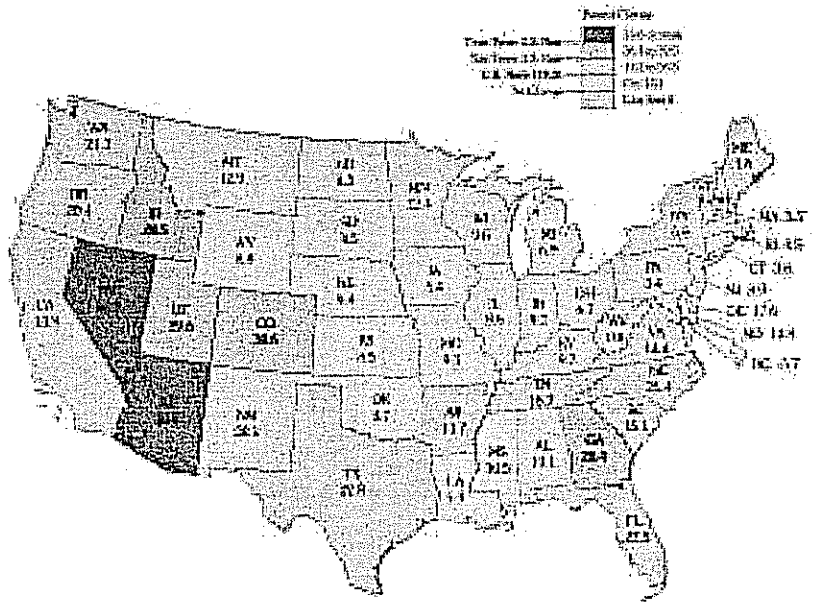


Reality Number 1:
Explosive Population Growth in Arid Areas

Explosive population growth is occurring in areas where water supplies are limited and the demand for water is increasing.

Demographic Changes: Population Has Grown Fastest in the West, Particularly in the "Public Land States"

Percent Change in Resident Population for the 48 States and the District of Columbia: 1990 to 2000



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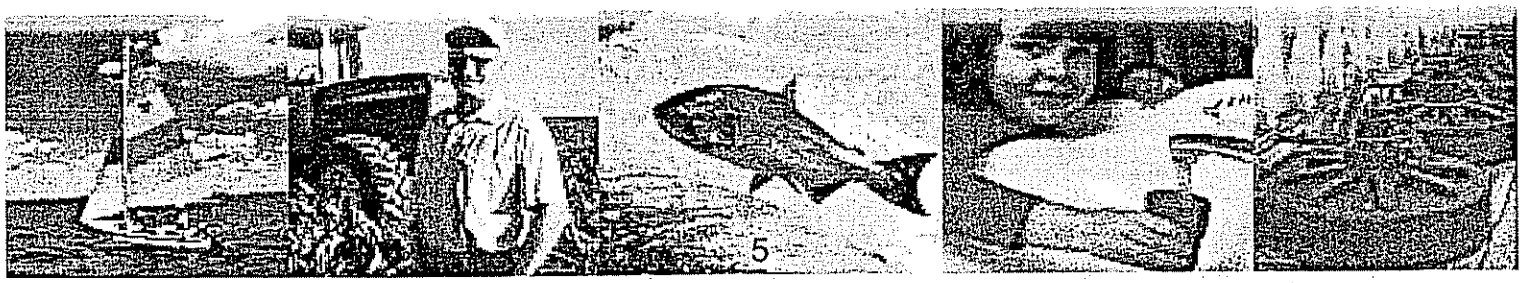
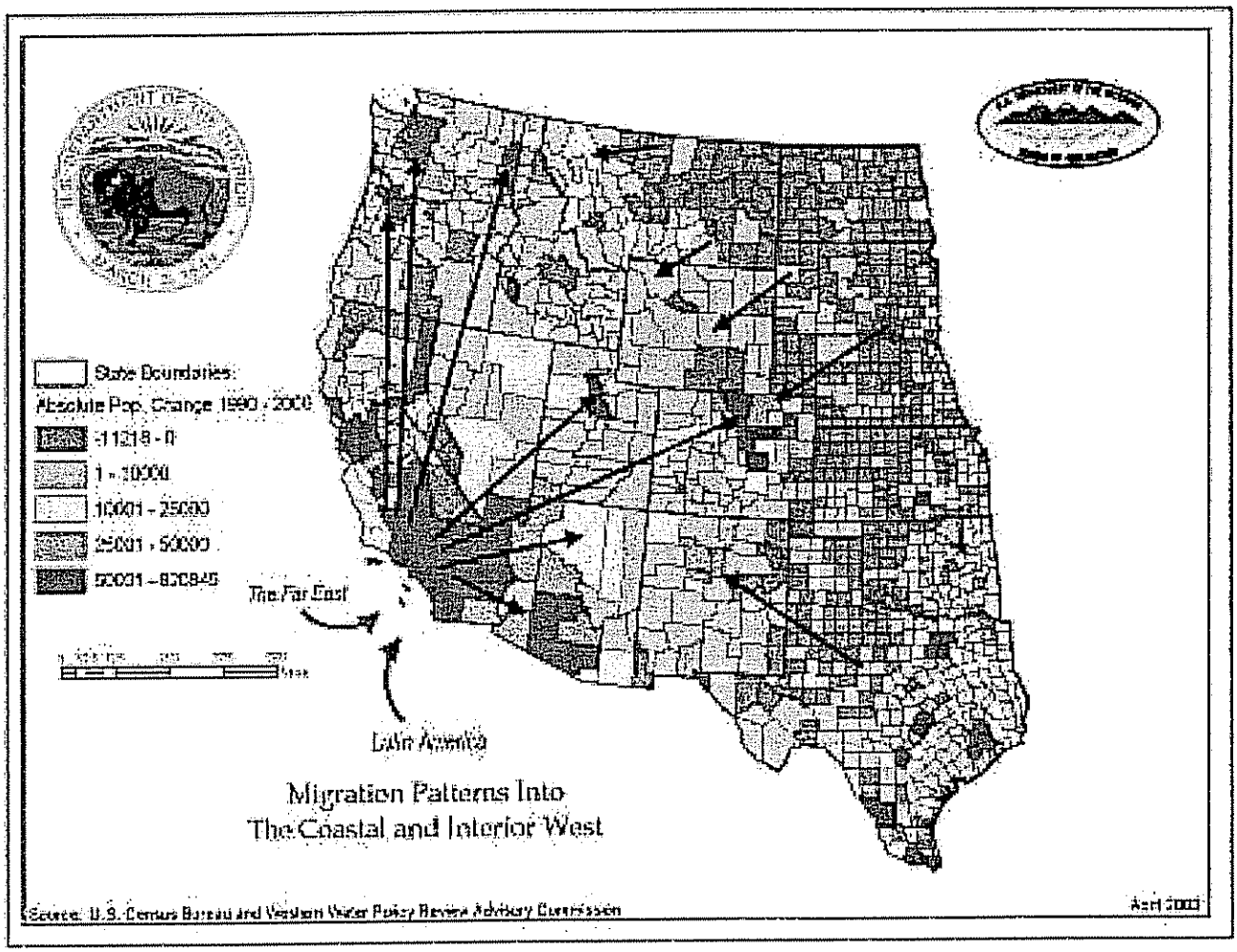
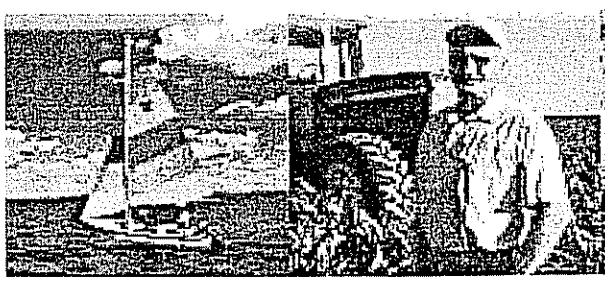
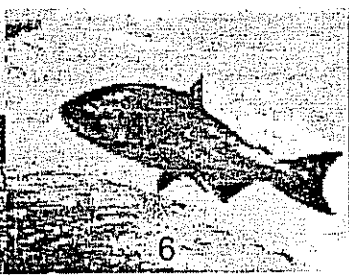


Reality Number 1:
Explosive Population Growth in Arid Areas

Urban growth in the West presents water management challenges that must be met if we are to avoid bitter conflicts that may have significant adverse social, economic, and environmental impacts.



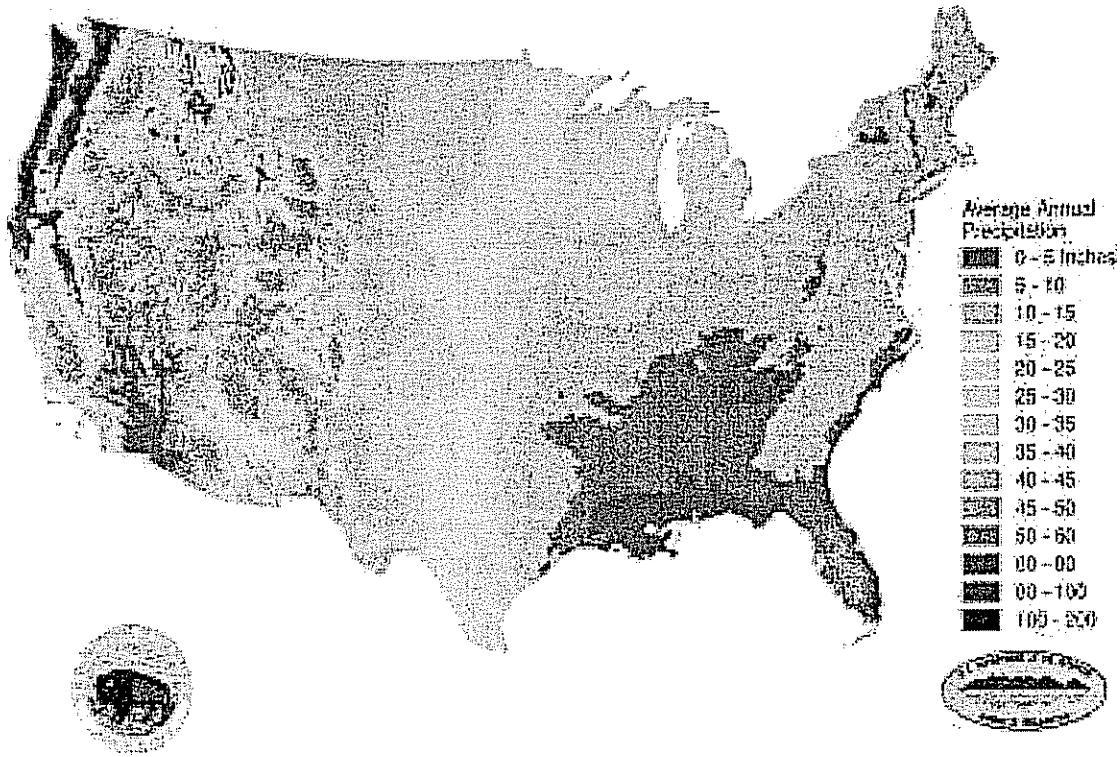


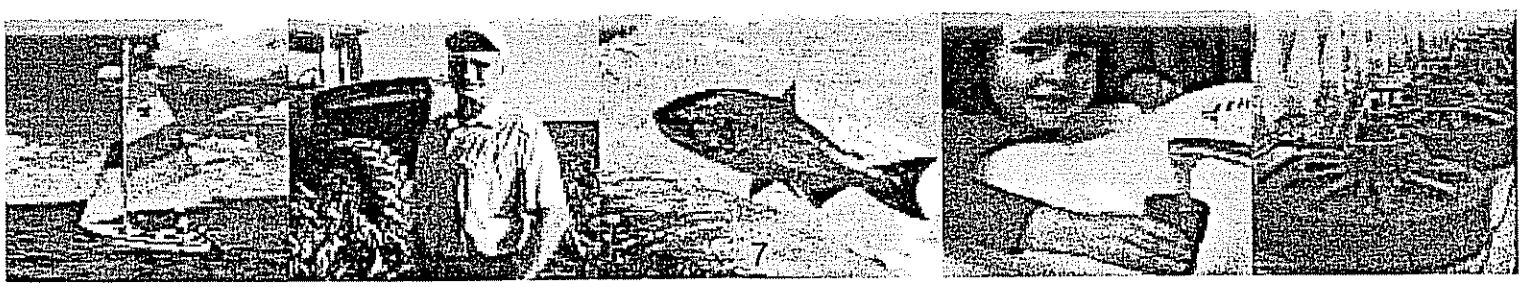


Reality Number 1:
Explosive Population Growth in Arid Areas

Some areas in the Western United States receive less than one-fifth of the annual precipitation that other areas of the country enjoy. Adding explosive urban growth to existing uses in these areas increases pressure on a limited resource – water.

Average Inches of Annual Precipitation
in the United States 1961-1990





Reality Number 2:
Existing Water Supplies are Inadequate

In some areas the water supply will not be adequate to meet all demands for water even in normal water years. Inevitable droughts merely magnify the impacts of water shortages.

Severe droughts can have dramatic effects. During 2002:

•Rainfall in the Colorado River basin was the lowest in recorded history.

•Rio Grande flows in New Mexico were at 13 percent of normal; Elephant Butte Reservoir held only 19 percent of its capacity, the lowest water level since the dam was built in the early 1900s.

•Boise, Idaho, had one of its driest calendar years on record.

•Extended drought and a reduced water supply have placed a great strain on the communities in the Lower Rio Grande.

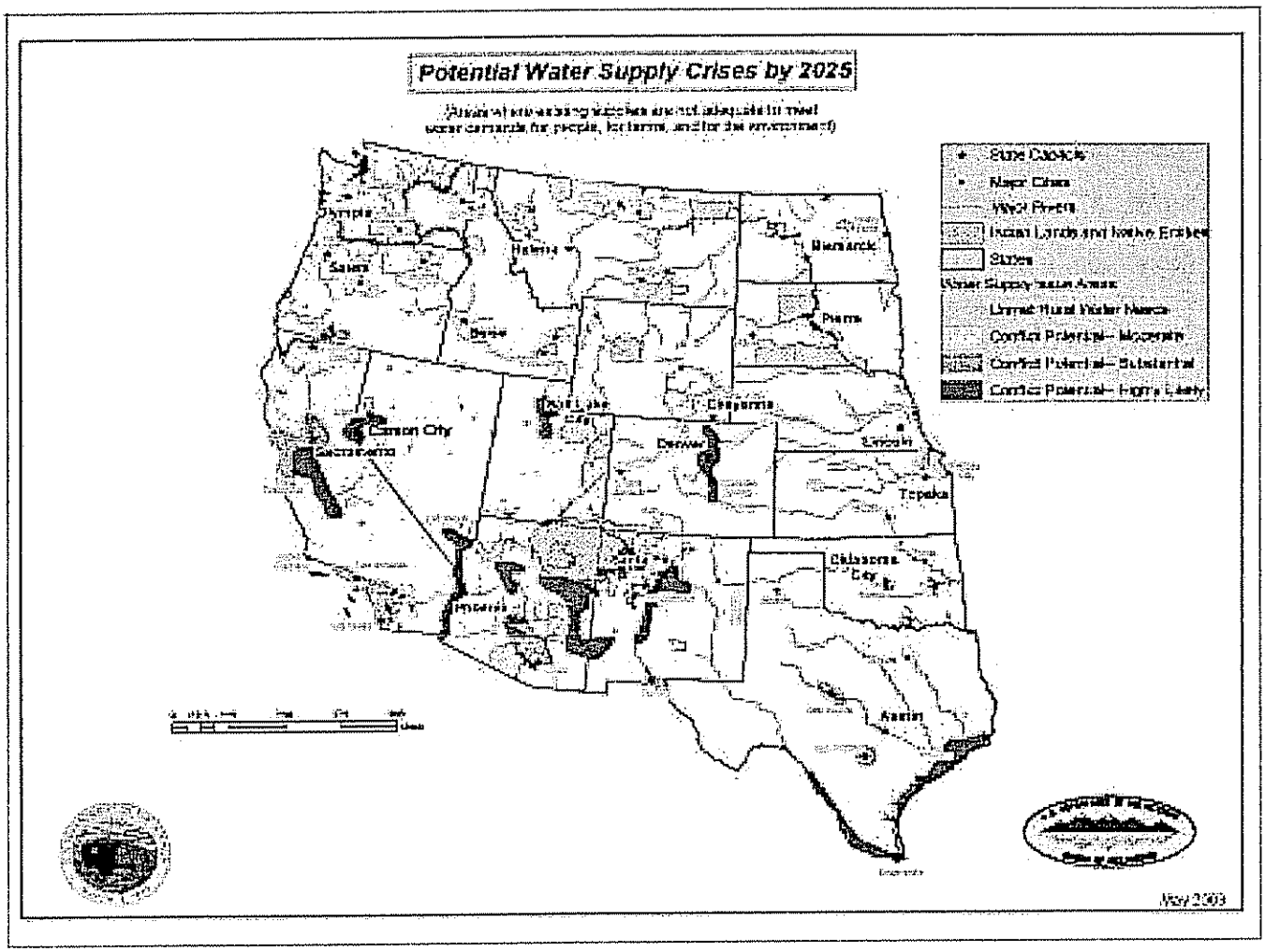
However, the potential for conflict over water supplies is no longer defined by drought events.

Water supply and management issues are becoming increasingly important as the demand on existing supplies continues to grow. Increasing populations in many areas, combined with increasing demand for water for recreation, scenic value, and fish and wildlife habitat, have resulted in conflicts throughout the country, especially in the arid West.

Congressional Research Service report for Congress, "Water Resource Issues in the 107th Congress," by Betsy Cody and H. Steven Hughes, January 16, 2001

Reality Number 2:
Existing Water Supplies are Inadequate

Improved water management requires knowledge of basin-specific problems. The Bureau of Reclamation prepared an analysis of potential water supply crises and conflicts by the year 2025. This analysis is based on a combination of technical and other factors, including population trends and potential endangered species needs for water. The Department of the Interior intends to seek extensive input from states, tribes, and the public on this analysis and expects that it will be revised and improved through this effort.



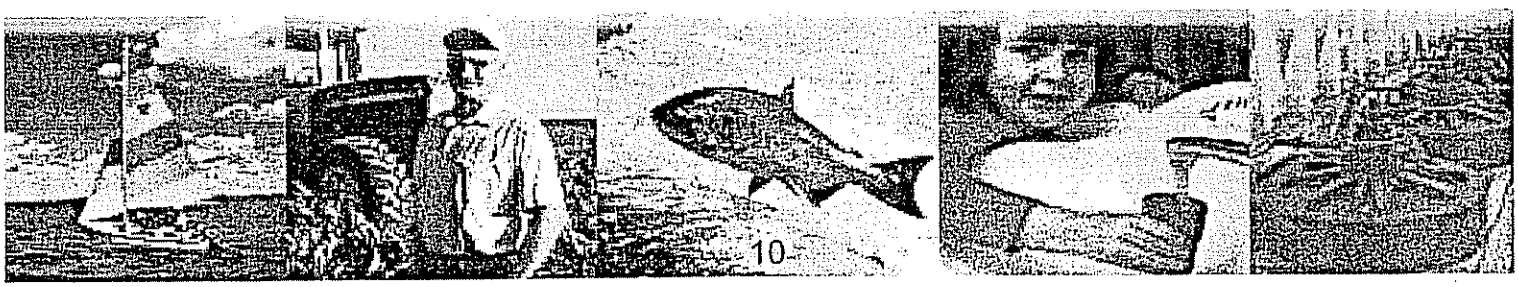
As a part of Water 2025, the Department of the Interior will use all available tools that have a demonstrated capacity to address potential water supply crises.

Reality Number 3:
Over-Allocated Water Supplies Can Cause Crisis and Conflict

A sign from Klamath Basin crises

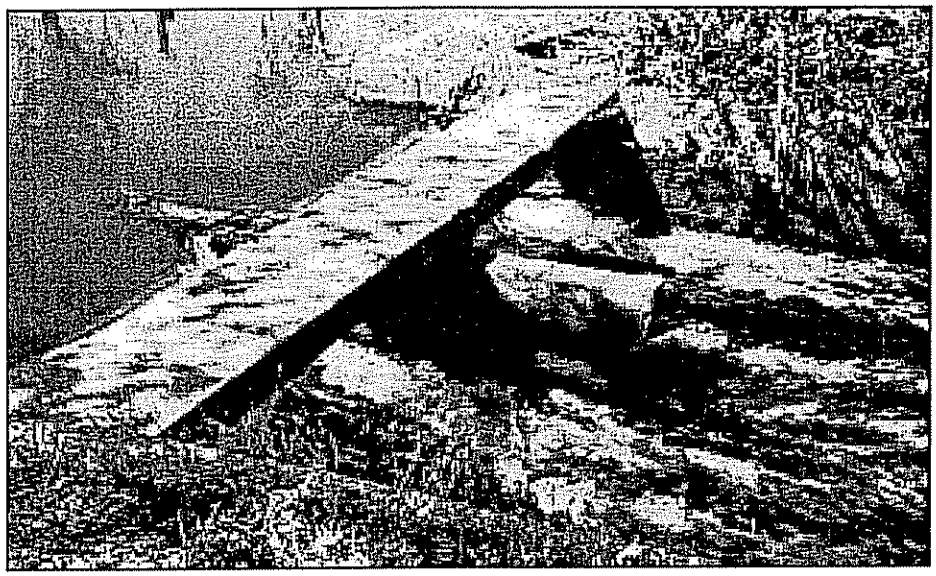
Recent crises in the Klamath River and Middle Rio Grande basins -- where farmers, cities, Native Americans, fish and wildlife all were impacted by the water shortages -- vividly demonstrate the consequences of failing to address competing demands of people and the environment for a finite water supply. The Nation cannot afford repeated water crises. The social, economic, and environmental consequences of water supply crises are too severe.

A dry Middle Rio Grande riverbed



Reality Number 4:
Aging Water Facilities Limit Management Options

Most of the federal infrastructure that manages the finite usable water supply in the West is approaching 50-60 years of age, and some facilities are almost a century old.



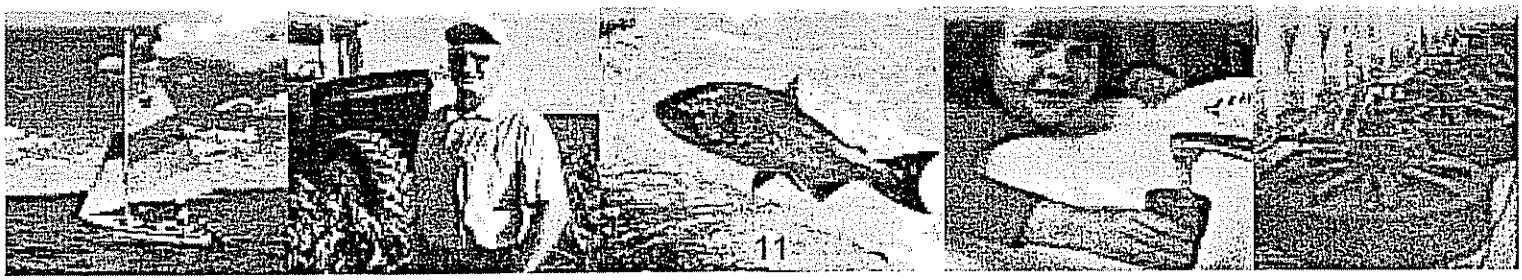
Aging irrigation water control structure

Beginning in the early 1900s, the federal government built many of the water storage and delivery facilities in the arid West to develop water supplies for a growing and expanding United States.

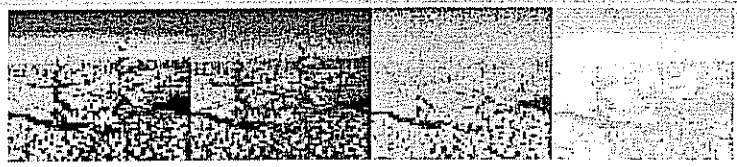
These systems - the visions of past water use pioneers - created vast areas of irrigated agriculture, harnessed the power of falling water to produce energy, and allowed cities to flourish.

Many water supply facilities today in the West continue to use 19th century technology to attempt to meet 21st century problems.

In some instances, canals can lose up to 50 percent of their irrigation water through seepage.



Reality Number 5:
Crisis Management is Not Effective



Crisis management is not an effective solution for addressing long-term, systemic water supply problems.

Congress, states, tribes, and interested citizens have over the years sought to define and refine water policy in the West. Many studies and other processes have assessed these issues at a conceptual level. Collectively, these studies would fill entire rooms. However, in reality, the options for addressing water supply crises are fairly well known and understood. In the long run, shortages in water quantity can be met only by increasing efficiency of existing uses, transfers of water between uses, reducing or eliminating existing water uses, the development of alternative sources of water such as desalination, or by storing additional water in wet years for use in dry years.

Public and policy-level attention to water supply issues in drought conditions tends to disappear as soon as rain (or snow) relieves the drought. But drought is only a magnifier of the larger problems associated with rapid population growth and environmental demands for water in areas where water supplies are already over-allocated.

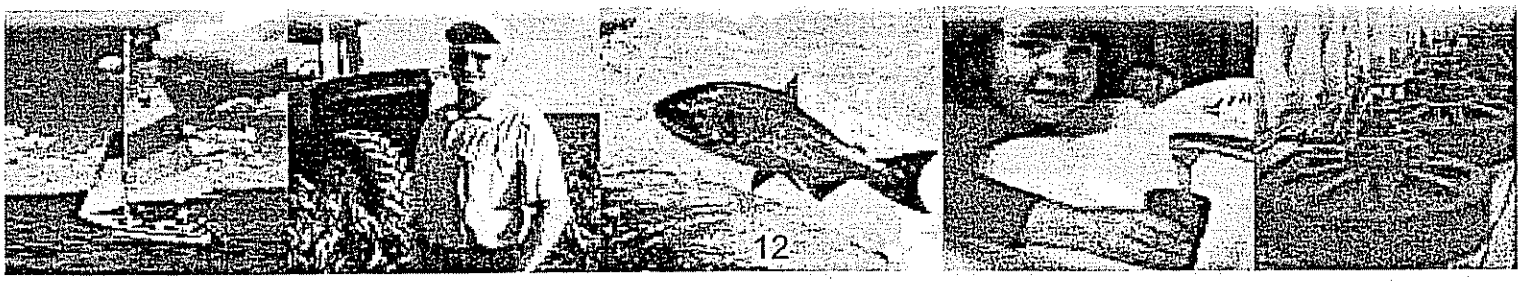
Water 2025 is intended to focus sustained attention on measures that can be put in place before extended drought or other pressures push communities toward divisiveness and conflict.

Simply put, the West has developed to the point that the social, economic and environmental consequences of water supply crises are no longer a local or regional issue. These crises now affect economies and resources of national importance.

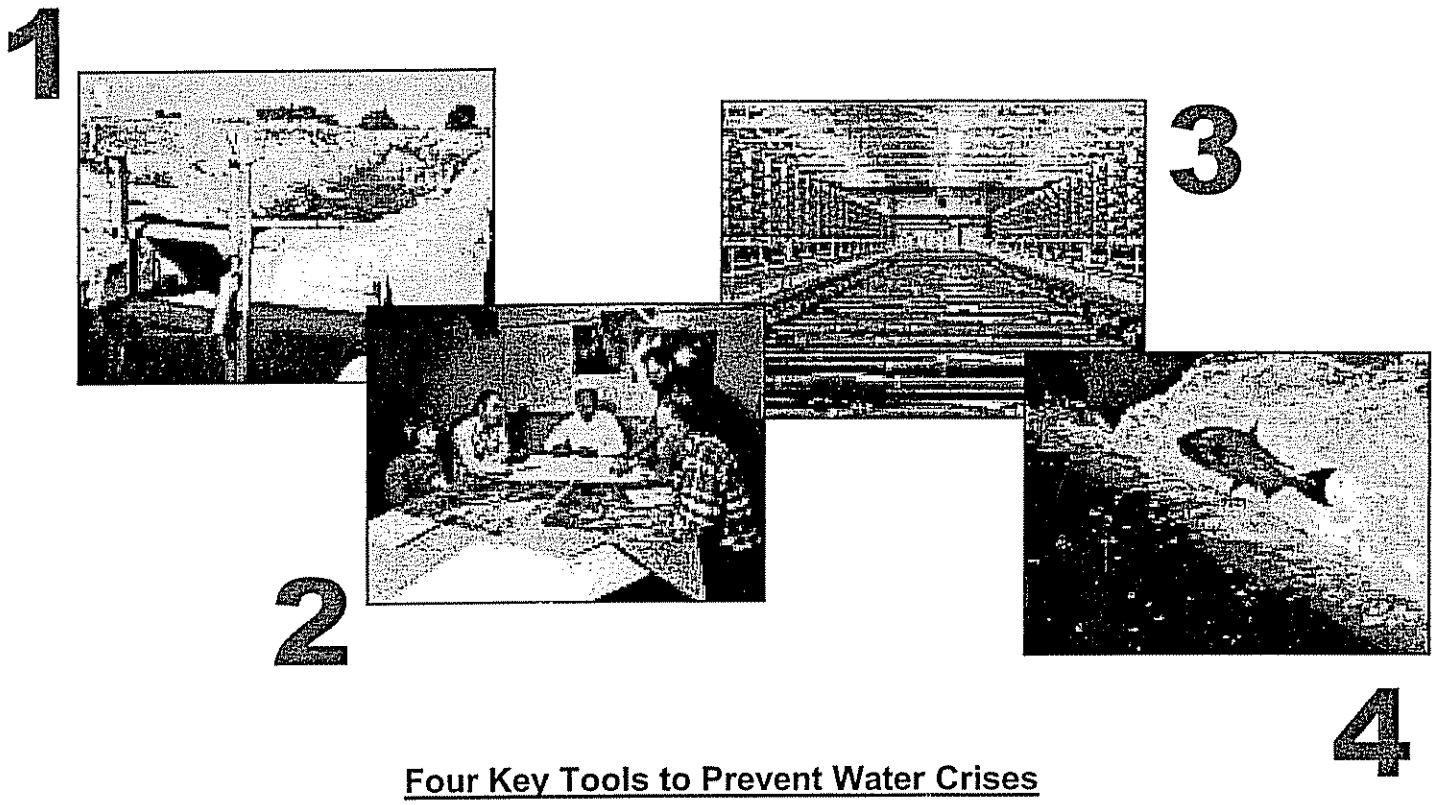
Conflict can be minimized or avoided when potential water supply crises are addressed in advance by local and regional communities.

Mere plans or endless processes are not a substitute for decision making, and can have the unintended and adverse effect of delaying action until a potential crisis becomes a reality.

In some areas of the West, communities are already implementing water banks, voluntary transfers between existing users, and water conservation measures to address potential water supply crises in advance.



Meeting the Challenge



Four Key Tools to Prevent Water Crises

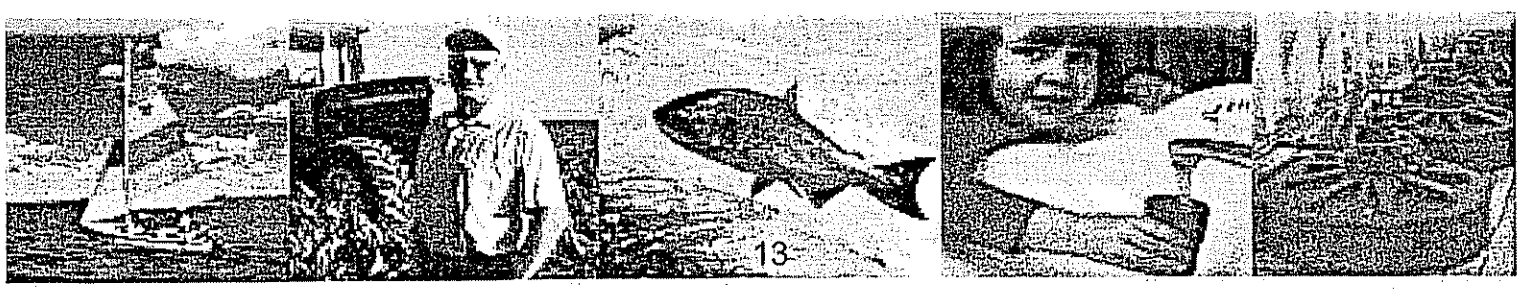
Water conflicts can have serious social, economic, and environmental impacts. Through Water 2025, the Department of the Interior identifies four key tools to help prevent future conflict and crises over water in the West.

1. **Conservation, Efficiency, and Markets**

2. **Collaboration**

3. **Improved Technology**

4. **Remove Institutional Barriers and Increase Interagency Coordination**



Conservation, Efficiency, and Markets:

Improve Water Management and Use Market-Based Approaches To Head off Conflicts

1 In many cases, implementation of new water conservation and efficiency improvements through cooperative partnerships will result in an increased ability to meet otherwise conflicting demands for water.

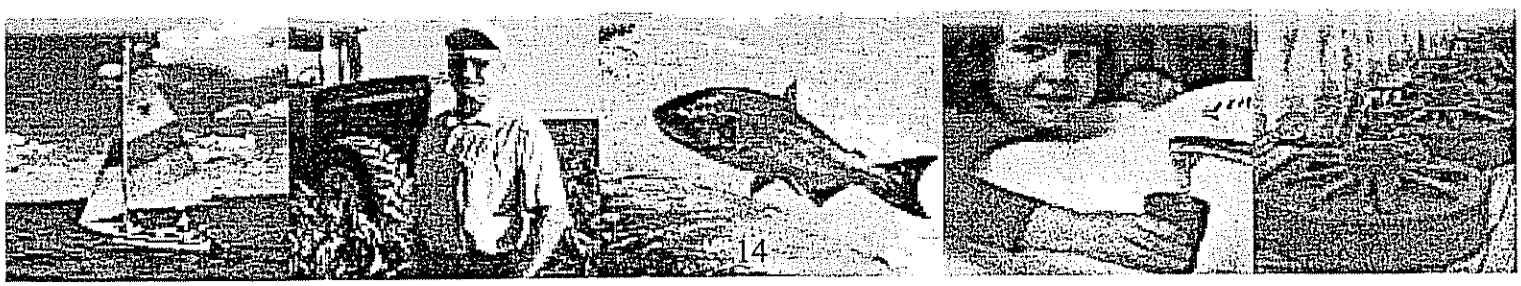
Most irrigation delivery systems were built in the early 1900s and remain virtually unchanged today. These irrigation delivery systems can be modernized and retrofitted with new water management technologies. Water districts can install cost-effective water management technologies, using low-cost solar-powered components that allow remote water measurement and operation of deliveries through irrigation delivery systems. The initial investment in these systems, though significantly less than in the past, can still be burdensome to many water delivery organizations.

♦The Department of the Interior will work with partners to retrofit and modernize existing facilities to accomplish improved water management through the use of new technologies.

Modernized Canal Structure

For example, with Reclamation's assistance, irrigation districts have installed automated control and remote water measurement structures.

✓In Idaho's Payette Valley, nine irrigation districts and canal companies within the Payette River Water District have automated 29 control structures, installed more than 30 remote water monitoring and measurement devices, and modified a large dam on the river. These improvements provided just enough additional operational water storage to vastly improve the efficiency of river operations.



Conservation, Efficiency, and Markets:

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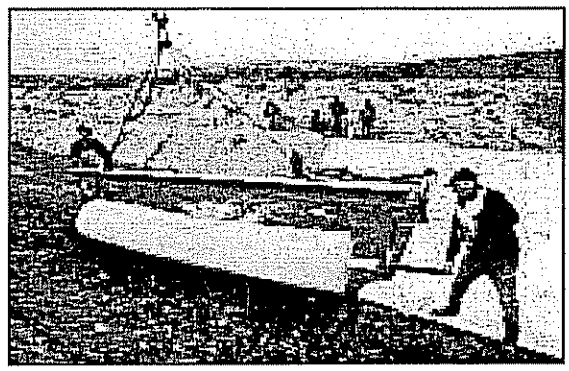
✓SCADA (Supervisory Control And Data Acquisition) systems allow river managers to remotely monitor and operate key river and canal facilities on a real-time basis. Individual stations can be set to monitor river levels or flow rates continuously. In addition, Reclamation and water district managers can respond to daily water management needs and emergencies in a timely fashion by controlling pump and canal facilities remotely. The cost of this high-tech equipment was once thought to be out of reach for most irrigation delivery entities, but today has become more affordable. However, less than 20 percent of irrigation water delivery systems currently use this technology.

♦Reclamation's research has shown that for every $1 spent on canal modernization (such as rehabilitating canal gates), an expected return of $3 to $5 in conserved water can be achieved.

✓For every $1 spent on maintaining an existing canal lining, a return of up to $10 in conserved water can be achieved.

✓Canal-lining technologies can minimize seepage losses at a reasonable cost.

✓More than 30 test sections have been constructed in several irrigation districts throughout the Pacific Northwest. Canals in central Oregon have reduced seepage losses by up to 50 percent.



Installing canal lining technologies

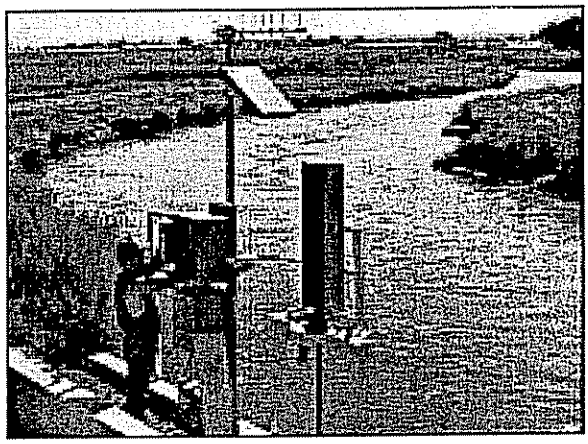
♦Most irrigation water delivery canals in the West are currently unlined. Water savings and corresponding increases in available water supplies from installation of canal lining technologies could be significant as a whole.

✓Reclamation is providing funding and technical assistance to state and local agencies and water districts in the Klamath basin area to conserve existing water through the lining of canals.

Conservation, Efficiency, and Markets:

Improve Water Management and Use Market-Based Approaches To Head off Conflicts

♦ Accounting for irrigation water deliveries plays a vital role in an effective water management system. Improvements in design and construction of new measuring devices allow water to be accurately measured. These devices could become the foundation for improved water management in the West.

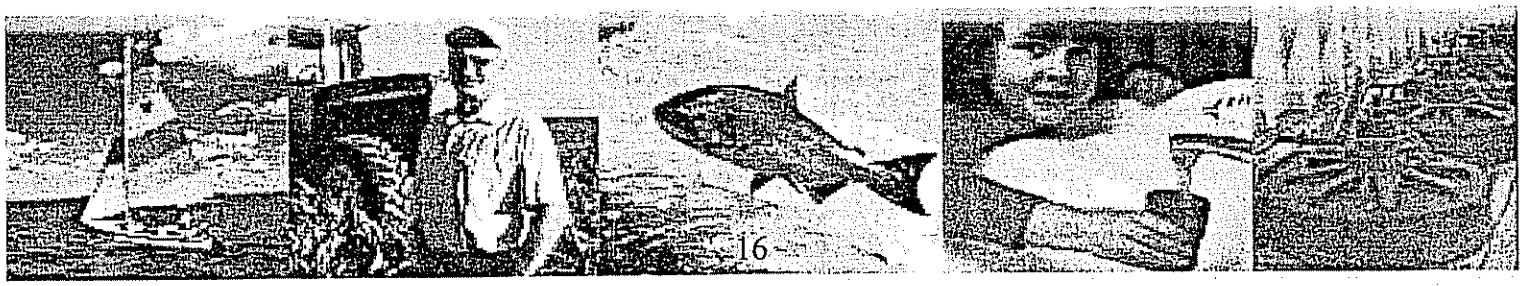


Solar-powered headgate

✓The Ochoco Irrigation District in central Oregon lost approximately 40 cubic feet per second (cfs), or 25.8 million gallons per day, at the end of their irrigation system. The District, in partnership with Reclamation, dramatically cut its daily losses by 75% after installing advanced water measurement equipment. In the last two irrigation seasons, these improvements have allowed the district to provide irrigation water for a longer period of time, even though both the 2001 and 2002 water seasons have been drought years in central Oregon.

♦Water banks and markets are essential to avoiding crises in critical areas of the West. The use of water banks and markets is sometimes a source of concern to agricultural areas and the communities that support them. However, the Department of the Interior strongly supports the use of these mechanisms to allow water to be shifted between competing water uses because they are based on a recognition of the validity of existing rights. Water banks also avoid or reduce the conflict, crisis, and heartache that results when water uses are changed through regulatory or other means. More importantly, water banks can provide a mechanism for preserving irrigated agriculture and meeting other water supply needs.

✓A critical component of the "CalFed" process in the Central Valley of California is the innovative Environmental Water Account. This account provides a mechanism for state and federal governments to purchase water from willing sellers in order to meet important ecological restoration goals in the San Francisco Bay Delta region.



Conservation, Efficiency, and Markets:

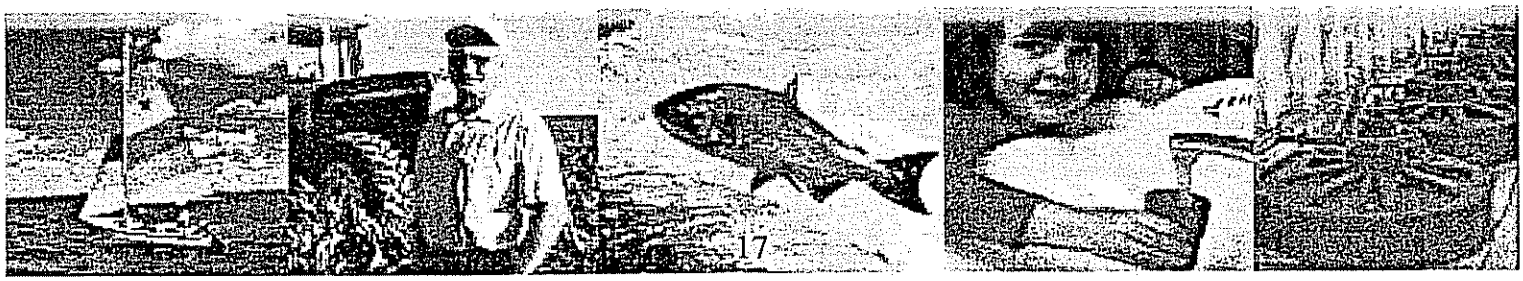
Improve Water Management and Use Market-Based Approaches To Head off Conflicts

✓A form of "water bank" has been in operation in Northern Colorado for over 50 years. Water delivered from the federal Colorado-Big Thompson Project (C-BT) can be rented on an annual basis between agricultural water users and municipalities within the Project. Once the buyer and seller have reached agreement on the price, water is transferred when the seller simply sends a postcard to the water district that manages the water from the C-BT Project. Permanent transfers of water within the District can occur between willing buyers and sellers in a process that takes months, not years, to complete with transaction costs of a few thousand dollars. Over the years, municipalities have acquired additional Project water to meet the needs of their growing populations during droughts. However, a substantial amount of the municipally-held water supplies are rented back to farmers in normal years. This combination of permanent transfers and annual rentals has allowed the region to meet the needs of a growing population ***and*** protect a very important agricultural economy.

✓A dynamic similar to the one in Northern Colorado is currently developing in California, where farmers have the option to sell water on a short term basis to urban areas within California that have short term needs. This flexibility allows farmers an additional option in years when the market for agricultural products will not produce an acceptable rate of return, and preserves their ability to stay in production in the long term.

✓Three Idaho water banks enable water users to transfer their surplus storage entitlements to other uses. These water banks helped provide in-stream flows for ESA-listed species of salmon. While controversial, it prevented conflict between traditional water users and the federal government in the implementation of the ESA.

✓In 2000, the State of Colorado authorized a five-year water banking program for the Arkansas River Basin to help farmers receive revenues for temporarily leasing their water to others, with the water rights remaining in agriculture.



Conservation, Efficiency, and Markets:

Improve Water Management and Use Market-Based Approaches To Head off Conflicts

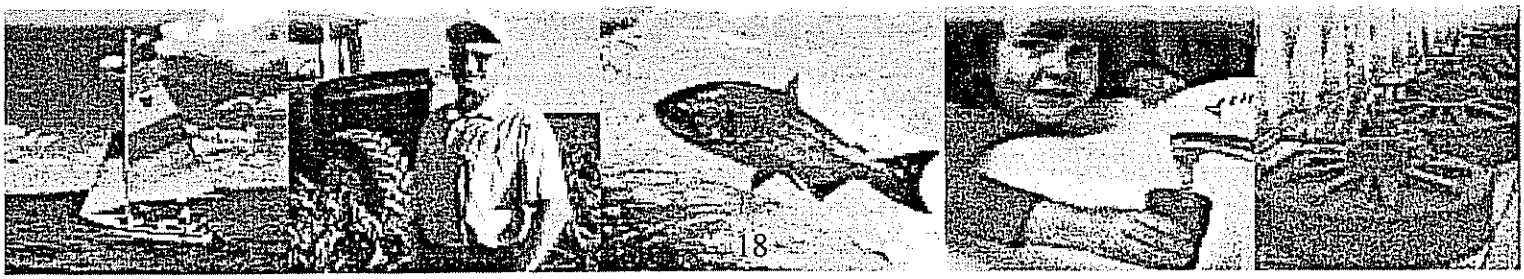
♦ Interagency efforts to coordinate both existing and new water conservation programs would improve the return on federal dollars already being spent "on the ground," allowing for marked improvements in water management.

✓The USGS will enhance groundwater monitoring and stream flow-measurement systems in critical areas of the West. This will improve drought evaluations, predictions, and long-term resource planning. States, tribes, and localities would maintain their important role in setting priorities for these enhancements.

✓Improvements in the coordination of collection and management of snow pack and runoff data in critical watersheds will allow water managers to predict and plan for water shortages earlier than current systems.

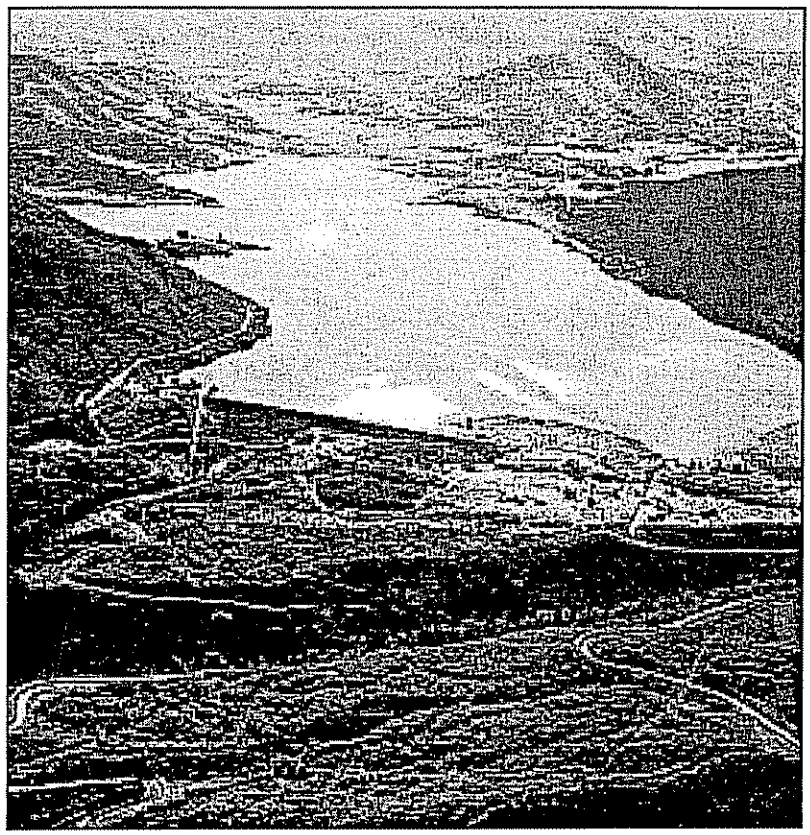
✓Reclamation and USGS are partnering on the Watershed River System Management Program to create models that will help farm agencies, drought planners, and others better understand the unique aspects of the basin when they make critical decisions.

Reclamation and the USDA Natural Resource Conservation Service will continue to construct and manage SnoTel sites across the West that measure and record real-time snow pack data used to develop runoff forecasts for entire watersheds. Such partnerships would be expanded to include watersheds that are suffering shortages of both water and adequate data used to predict and forecast water supply.



Collaboration:
Cooperative Approaches To Resolving Conflict

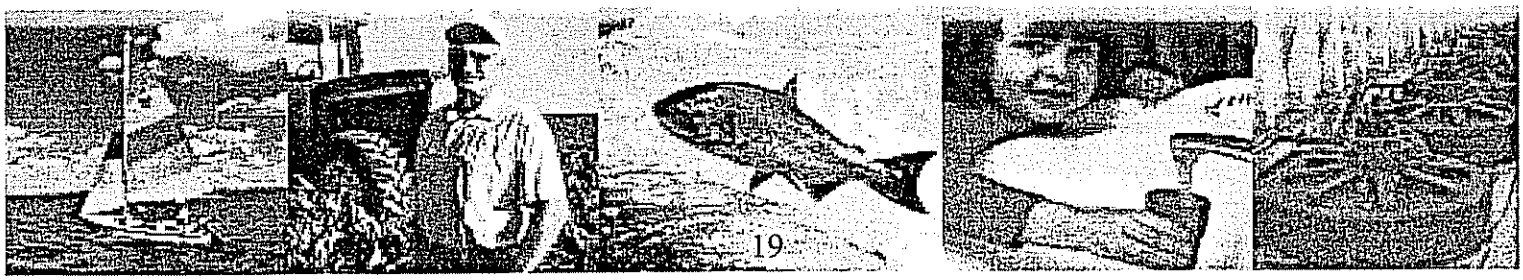
2 Significant water supply crises must be addressed in advance of the crisis. Collaborative processes that are based on recognition of the rights and interests of the stakeholders allow the problem solving that maximizes the opportunity for innovation and creativity.



♦ One of the most important aspects of intelligent water management in the West is to have a system that allocates available water supplies in a rational manner when there is not enough to meet all demands for water.

Congress has decided that, except in limited circumstances, states should have the authority to allocate water within their boundaries. Congress has also required that federal needs for water must respect prior rights to water created under state law, and that both federal and nonfederal needs for water must be integrated into a single priority system in states that follow the doctrine of "prior appropriation."

The integration of claims to water typically occurs in court proceedings. These proceedings or "adjudications" can be complex and take decades to complete. The problem is that until these



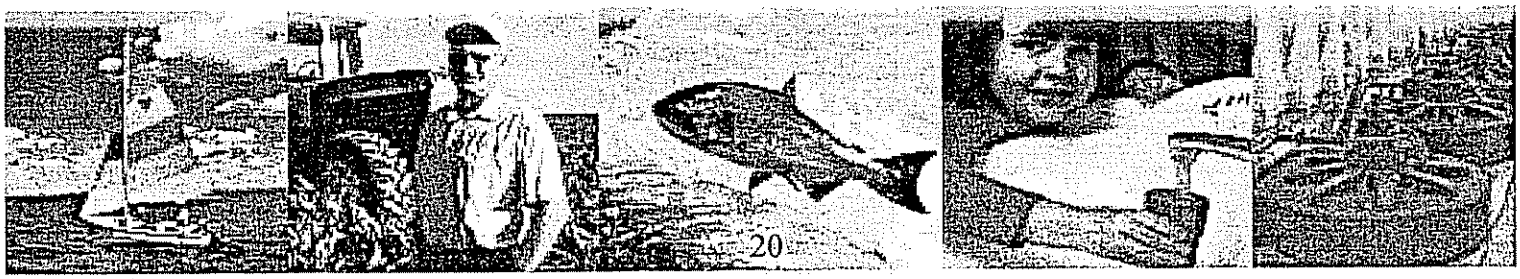
Collaboration:

Cooperative Approaches To Resolving Conflict

proceedings are completed, water managers do not know how to allocate water in times of scarcity. The resulting uncertainty over "who owns what" causes chaos and conflict. The Department of the Interior is committed to working with states, tribes, and interested stakeholders to find ways to accelerate these proceedings in order to protect existing federal and non-federal rights.

♦ A common element of many of the potential crises identified in Water 2025 is the need to provide for water supply for people, cities, and farms in a manner that also attains the goals of the federal Endangered Species Act. Success in meeting this challenge almost always requires a collaborative effort between stakeholders, as is demonstrated by the success of the Upper Colorado River -- San Juan Endangered Fish Recovery Programs. These Recovery Programs provide for the recovery of endangered species and the continued use and development of water for people, for cities, and for farms. A similar effort is underway in the Central Valley of California, where the "CalFed" process has brought diverse stakeholders together in an effort to protect and restore important ecological resources *and* protect the people and economy of California.

These large scale efforts to meet the needs of people and the environment are based on several realities. First, the twin goals of recovery of endangered species and meeting the water needs of people who live in these areas cannot be attained when the issues and resources are locked into a cycle of short term litigation and decision-making. Long term Biological Opinions issued under the Endangered Species Act are essential to the long term planning and predictability that both people and endangered species need. Second, public support for the state, private, and federal commitments that is required to meet these twin goals is essential. Stakeholders typically will not commit public or private resources to water supply development and endangered species recovery efforts without an assurance that the benefits of their investment of resources will not be swept away by short term decision making.



Collaboration:

Cooperative Approaches To Resolving Conflict

The 4-C's in action: Conservation through Cooperation, Communication, and Consultation

♦ Collaboration between stakeholders can also result in a resolution of longstanding conflicts. Interior will partner with state and local governments, tribes, water users and conservation groups to improve river systems.

✓For more than 2 decades, the East Bay Municipal Utility District and several localities struggled over the management of the Sacramento River, thus disrupting the efficient use of water. Through facilitation sponsored by the Bureau of Reclamation, a sustainable and locally developed agreement was reached.